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ACTON RESEARCH CORPORATION

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Optical Coatings/Replica Optics/Vacuum UV Test Facilities

359/359

ARC
PRODUCT DATA
NO. 210

350/1.6

JUNE 1972

Reflective coatings for the region below 2000Å

Now, your optics can be coated with the highest quality coatings available for use in the region below 2000A.

Our ten years experience specializing in the production of quantity lots and one-of-a-kind vacuum UV coatings has been characterized by innovative techniques to assure the highest quality coatings available, care in handling your optics, and fast delivery.

At Acton Research Corp., every coating produced undergoes stringent quality assurance procedures which include reflectance testing in one of our vacuum UV reflectometers.

ARC coatings are being used throughout the world and in outer space applications where only the finest coatings available are acceptable.

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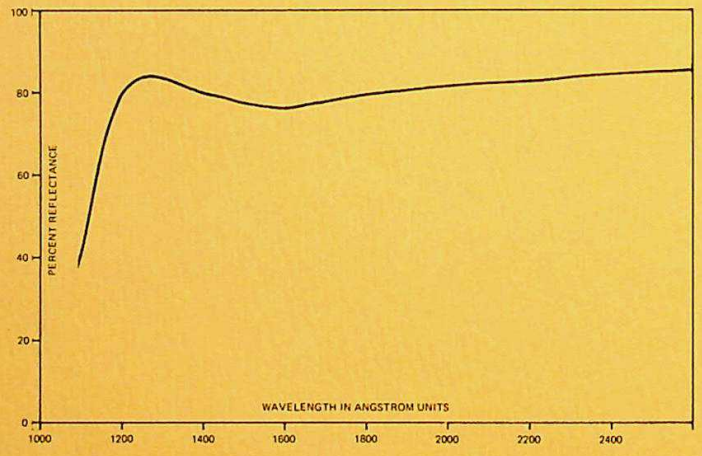
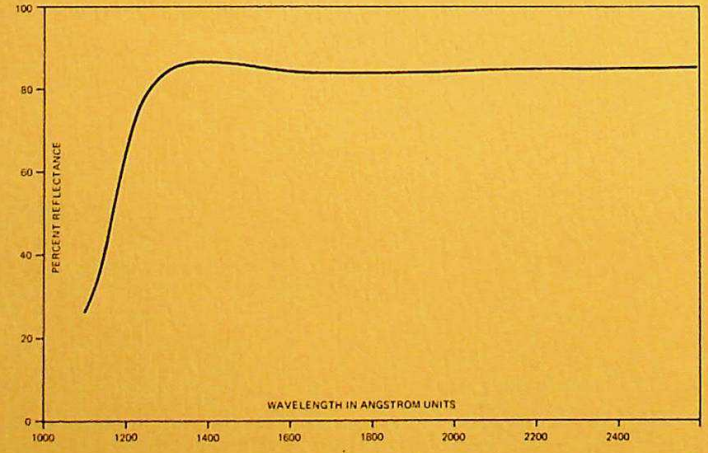
HIGH REFLECTANCE VACUUM UV COATINGS OF ALUMINUM AND MgF_2

The reflectance curves below demonstrate the efficiency of two standard ARC coatings of Al and MgF_2 for use in the region below 2000A.



Reference: ARC #1200
Coating: Al + MgF_2
Optimized for: 1216A
Reflectance guarantee: 78% at 1216A



Reference: ARC #1400
Coating: Al + MgF_2
Optimized for: 1400A
Reflectance guarantee: 82% at 1398A

Note: Reflectance measurements shown above were made at 15° angle of incidence.

For best results, always specify ARC high reflectance coatings when purchasing mirrors and gratings for use below 2000A!

O.L.

359/359

Improve the efficiency of your present vacuum UV instrumentation!

Acton Research Corporation has developed a unique capability for cleaning and recoating customer supplied mirrors and diffraction gratings. This ARC recoating technique often returns the efficiency of used vacuum UV instrumentation to a "like new" or even better condition.

The curves below illustrate the dramatic improvement in efficiency that is possible with this recoating technique when applied to a diffraction grating. Prior to the ARC treatment, this grating had been in use in a vacuum UV monochromator.

An even more dramatic improvement is obtained in multiple reflection systems such as the Czerny-Turner monochromator where three reflecting surfaces can be recoated.

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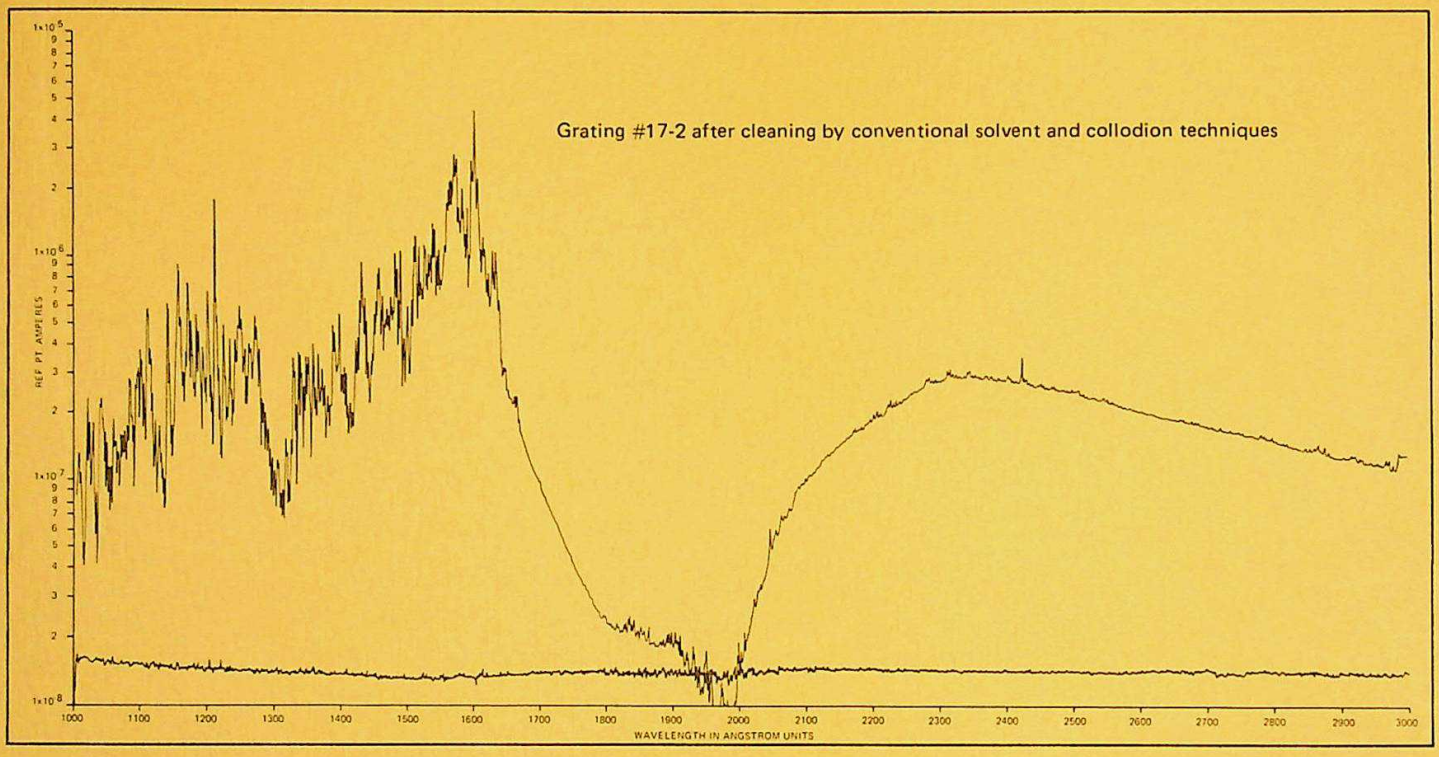
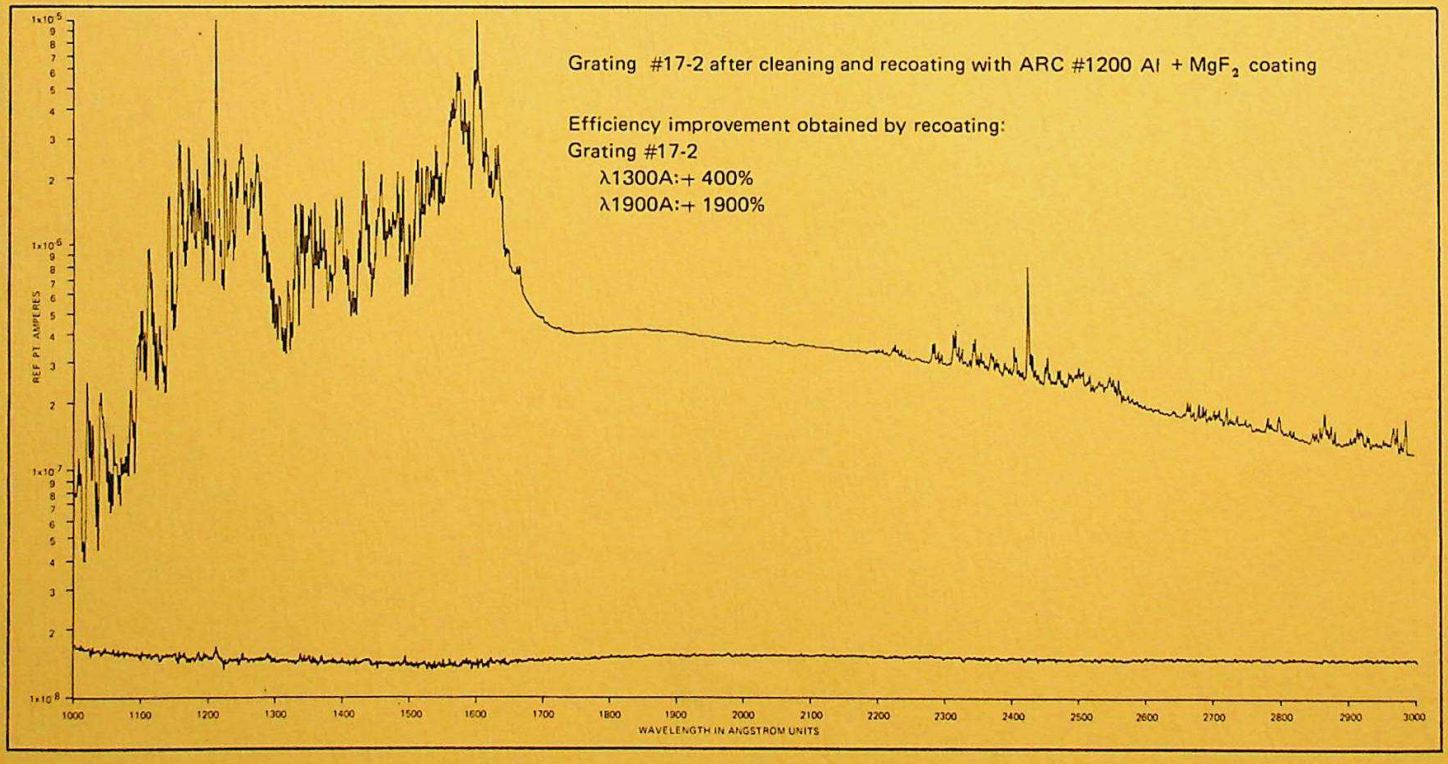

Grating #17-2 after cleaning by conventional solvent and collodion techniques
REF PT AMPERES
WAVELENGTH IN ANGSTROM UNITS


Grating #17-2 after cleaning and recoating with ARC #1200 Al + MgF_2 coating
Efficiency improvement obtained by recoating:
Grating #17-2
λ1300A:+ 400%
λ1900A:+ 1900%
REF PT AMPERES
WAVELENGTH IN ANGSTROM UNITS

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